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| 10/648,169      | 08/26/2003  | Kug-Jin Yun          | 3364P071C           | 4451             |

8791 7590 10/19/2007  
BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
1279 OAKMEAD PARKWAY  
SUNNYVALE, CA 94085-4040

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| EXAMINER |
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HUBER, JEREMIAH C

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2621

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10/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/648,169 | <b>Applicant(s)</b><br>YUN ET AL. |  |
|                              | <b>Examiner</b><br>Jeremiah C. Huber | <b>Art Unit</b><br>2621           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/317861.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/29/2007 has been entered.

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/317861, filed on 11/20/2002.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 12-15 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al (6574423) in view of Chai et al (6553147).

In regard to claim 1 Oshima discloses a stereoscopic three-dimensional video processing system that includes:

a compressor for processing input stereoscopic three-dimensional video data according to the MPEG 2 standard to generate field-based elementary streams of multiple channels and multiplexing the multi-channel elementary streams into a single integrated elementary stream (Oshima fig. 1 #3a, #b and 4), wherein the multiplexing is performed according to a user selected display mode that includes one of a field based shuttering display mode and a frame based shuttering display mode (Oshima Fig. 23 col. 12 lines 35-55 note 72-73 for field based shuttering, Fig. 25 and col. 13 lines 6-20 for frame based shuttering also col. 7 lines 35 to 47 for user selecting the stereoscopic display mode), and that the field based shuttering display mode is a fractional portion of the frame based shuttering display mode (Oshima col. 13 lines 36-40 note field shuttering mode can be displayed as a field shuttering mode); and

a transmitter for processing the stereoscopic three-dimensional video data and storing the processed video data (Oshima fig. 1 #9);

It is noted that Oshima does not disclose details of a packetizing process. However, Chai discloses a method in which video and audio data are packetized before transmission. Chai further discloses one or more encoders compatible with MPEG 2&4 standards (Chai fig. 2 #220<sub>1</sub> and #220<sub>n</sub> and col. 1, lines 25-40 and col. 4 lines 12-42). It is therefore considered obvious that one of ordinary skill in the art at the time of the invention would recognize the advantage of including a packetizer and MPEG 2&4 capable encoders as taught by Chai in the video processing system disclosed by

Oshima, in order to allow transmission of non-audio/video data and to be compliant with a wider range of standards. One would further expect the invention of Oshima to operate in this manner because Oshima discloses packetized data (Oshima fig. 42 'system stream').

In regard to claim 2 refer to the statements made in the rejection of claim 1 above. Oshima discloses a three dimensional object encoder for encoding the input stereoscopic three-dimensional video data to output multi-channel field based elementary streams (Oshima fig. 1 #3a and 3b), and a three-dimensional elementary stream mixer for integrating and outputting the multi-channel field-based elementary streams into a single elementary stream (Oshima fig. 1 #4).

In regard to claim 3 refer to the statements made in the rejection of claim 2 above. Oshima further discloses that the object encoder outputs elementary streams in the unit of 4-channel fields including odd and even fields for left and right images when the input data are three dimensional stereoscopic data (Oshima fig. 23, output from compressing units 103a&b contains 4 fields denoted by circles, x's squares and triangles).

In regard to claim 4 refer to the statements made in the rejection of claims 2 and 3 above. In this particular case  $N = 2$  and four field based elementary streams are outputted.

In regard to claim 5 refer to the statements made in the rejection of claim 2 above. As stated in the rejection of claim 1 Chai discloses the use of MPEG-4 encoders. It is inherent to the MPEG-4 standard that an encoder has an object descriptor stream

generator and a scene description stream generator. In regards to the two dimensional encoder, Chai discloses the use of multiple 2D audio/video (audio and video hence, multimedia) encoders (Chai fig. 2 #220 and 221 1-n). It is therefore considered obvious that one of ordinary skill in the art would recognize the advantage of including additional 2D encoders as taught by Chai in the invention of Oshima in order to process two dimensional data.

In regard to claim 6 refer to the statements made in the rejection of claim 2 above. Oshima further discloses a stereoscopic video identifier that represents the streams that were selected by the user to be recorded (Oshima fig. 13 and col. 8 line 55 to col. 9 line 47).

In regard to claim 7 refer to the statements made in the rejection of claim 6 above. Oshima further discloses that the stereoscopic video identifier can be used to identify two-dimensional data (Oshima fig. 13 and col. 8 line 55 to col. 9 line 47).

In regard to claim 12 refer to the statements made in the rejection of claim 6 above.

In regard to claim 13 Oshima further discloses the use of time stamps (Oshima fig. 22) and a table (Oshima fig. 4) specifying start address, end address, and channel number and a flag indicating whether video is two or three dimensional (Oshima fig. 13).

In regard to claim 14 refer to the statements made in the rejection of claim 1 and 6-7 above.

In regard to claim 15 refer to the statements made in the rejection of claims 1-3 and 14 above.

In regard to claim 20 refer to the statements made in the rejection of claim 14 above. Oshima further discloses adding time stamps to the video stream. The time stamps are used for stereoscopic synchronization purposes (Oshima fig. 22 #234 and col. 23 line 47 to col. 24 line 23).

In regard to claim 21 refer to the statements made in the rejection of claim 1 above. Oshima further discloses a DecoderConfigDescriptor or a flag indicating whether the video is two or three dimensional (Oshima Fig. 13).

3. Claims 8 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima in view of Chai.

In regard to claims 8 and 16 refer to the statements made in the rejection of claims 6 and 15 above. Oshima in view of Chai discloses alternately multiplexing groups of fields from right and left video streams (Oshima fig. 25 and col. 13 lines 7-20 Groups A-B for right odd and even and groups C-D for left odd and even). Oshima further discloses multiplexing only right odd fields and left even fields (Oshima col. 1 lines 17-35 hereafter Ro-Le)

It is noted that Oshima in view of Chai does not disclose expressly multiplexing only left odd fields and right even fields (hereafter Lo-Re).

However, it would have been obvious to a person of ordinary skill in the art at the time of the invention to multiplex Lo-Re. Applicant has not disclosed that Lo-Re provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention

to perform equally well with Ro-Le because both multiplexing schemes serve the same purpose of present left and right images in different fields.

Therefore, it would have been obvious to one of ordinary skill in this art to modify Oshima in view of Chai with Lo-Re multiplexing to obtain the invention as specified in claim 8.

4. Claims 9, 11, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima in view of Chai.

In regard to claims 9 and 17 refer to the statements made in the rejection of claims 6 and 15 above. Oshima in view of Chai discloses alternately multiplexing groups of fields from right and left video streams in the order of right odd, right even, left odd, left even (Oshima Fig. 25 and col. 13 lines 7-20 note Groups A-B for right odd and even and groups C-D for left odd and even hereafter Roe- Loe).

It is noted that Oshima in view of Chai does not disclose expressly multiplexing left fields before right fields (hereafter Loe-Roe)

However, it would have been obvious to a person of ordinary skill in the art at the time of the invention to multiplex Loe-Roe. Applicant has not disclosed that Loe-Roe provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with Roe-Loe because both multiplexing schemes serve the same purpose of transmitting left and right frames to a receiver or storage unit.



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Therefore, it would have been obvious to one of ordinary skill in this art to modify Oshima in view of Chai with Loe-Roe multiplexing to obtain the invention as specified in claim 9.

In regard to claims 11 and 19 refer to the statements made in the rejection of claims 9 and 17 above. Further note that Oshima discloses a stereoscopic image which is an N=2 multi-view image.

5. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima in view of Chai.

In regard to claims 10 and 18 refer to the statements made in the rejection of claims 6 and 15 above. Oshima in view of Chai discloses multiplexing odd and even fields of only one channel when in a 2D display mode (Oshima Fig. 13 and col. 9 lines 19-21 note stream A).

It is noted that Oshima in view of Chai does not disclose multiplexing from the left view.

However, it would have been obvious to a person of ordinary skill in the art at the time of the invention to multiplex 2D images from the left view. Applicant has not disclosed that multiplexing 2D images from the left view provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with any particular view because the left view has no inherent advantages over any other view.

Therefore, it would have been obvious to one of ordinary skill in this art to modify Oshima in view of Chai with left view multiplexing to obtain the invention as specified in claim 10.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremiah C. Huber whose telephone number is (571)272-5248. The examiner can normally be reached on Mon-Fri 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeremiah C Huber  
Examiner  
Art Unit 2621

*Mehrdad Dastouri*  
MEHRDAD DASTOURI  
SUPERVISORY PATENT EXAMINER  
TC 2600